

Suckling of a teat for two days in first parity ensures enough milk is produced in second parity

Submitted by Chantal Farmer, Ph.D., Research Scientist, Agriculture and Agri-Food Canada, Sherbrooke R & D Centre, QC, Robert Friendship, D.V.M., M.Sc., Professor, Ontario Veterinary College, University of Guelph, ON, Rocío Amezcua, D.V.M., Ph.D., Research Associate, Ontario Veterinary College, University of Guelph, ON

We know that if a teat is not suckled in first lactation it will produce less milk in second lactation. But for how long must a teat be suckled in first lactation to avoid such a negative effect? Most recent results show that if a teat is suckled for only two days in parity one, its milk yield will not be reduced in parity two. When comparing lactation lengths of two, seven or 21 days in first parity, milk yield of sows in second parity was not affected. There is therefore no advantage to leaving piglets for more than 2 days on a teat in terms of milk yield from that teat in the next parity. This finding is crucial for swine producers because it will impact the management of first-parity sows that have poor body condition. It would indeed be possible to remove some piglets from thin primiparous sows as of day three of lactation in order for these sows to improve their body condition, knowing that milk yield from the less-used teats will not be compromised in the subsequent lactation. This is information that will prove most useful for producers in the decision making relative to management of first-parity sows.

Lactating sows are greatly solicited in terms of milk yield because of the current use of hyperprolific sow lines. It is now customary to have more live piglets at birth than there are teats to feed these piglets. Sows must therefore produce large quantities of milk and will do so at the expense of their body reserves. This leads to the problem of overly thin sows, which is most prevalent in sows nursing their first litter, and which has a serious negative impact on reproductive performance and decreases sow longevity in the herd.

A solution to this problem could be to decrease litter size in primiparous sows with poor body condition but this is problematic because we now know that an unused teat in first lactation will produce less milk in second lactation (see article by Farmer and Devillers in *Western Hog Journal* – winter 2013, pp. 34-36). Would it however be possible to remove some piglets from the sow after a short period of time in lactation in order to give the dam a chance to replenish her energy reserves? A research project aiming to answer that question was carried out jointly between the Research and Development Centre of Agriculture and Agri-Food Canada in Sherbrooke and Guelph University. It was demonstrated that a teat can be



Figure 1. New piglets suckling.

used for only two days in first lactation without hindering its productivity second lactation.

This project was carried out with 61 primiparous sows and compared lactation lengths of two, seven, or 21 days in first lactation. The effects of treatment on piglet growth, milk composition and sow metabolic status in second parity were

CONTINUED ON PAGE 44

TOGETHER WE WILL SUCCEED

with **Magnum Force**
the A.I. Solutions Company

CELEBRATING 19 YEARS

GET MORE BOAR

www.magnumswine.com
1.888.553.4844



determined. In both lactations, litters were uniformized to 12 piglets of average body weight within 12 hours of farrowing and only 12 teats were kept functional. Surplus teats were taped so that there was one teat available per piglet. During the second lactation, the same 12 teats were made available and piglets were weighed at birth, and on days two, seven, 14, 21, 31 and 56 postpartum. Weaning took place on day 21 of lactation and suckling piglets had no access to dry feed so that their growth rate reflected sow milk yield. Representative milk samples were obtained on day 21 of lactation to measure dry matter, fat, protein and lactose contents. On that day, a blood sample was also obtained from all sows to measure concentrations of glucose, urea, and of the growth factor IGF-1, which reflects the energetic status of the animal.

Sows with a 21 day lactation in first parity consumed more feed in the first week of the second lactation (average daily consumption of 4.80, 4.58 and 5.65 kg for sows with lactation lengths of two, seven and 21 days, respectively, in parity one). However, this was not maintained in later lactation and was not associated with a greater piglet growth rate (see Table 1) or with changes in milk composition. Blood data also showed no differences in the metabolic status of second-parity sows related to lactation length in first parity.

In conclusion, new findings show that it could be possible to remove some piglets from the udder of first-parity sows without affecting milk yield from these teats in the next lacta-

Table 1. Weight and weight gain of piglets born from second-parity sows that had lactation lengths of 2, 7 or 21 days in first parity.

	2 DAYS	7 DAYS	21 DAYS
Weight, kg:			
Day 2	1.84	1.80	1.87
Day 7	3.03	2.85	3.00
Day 14	5.02	4.79	4.89
Day 21	6.78	6.63	6.66
Day 31	8.72	8.49	8.70
Day 56	23.2	23.1	23.5
Weight gain, kg:			
24-48 h postpartum	0.153	0.152	0.145
Days 2 to 21 (lactation)	5.07	4.98	4.92
Days 21 to 56 (post-weaning)	16.4	16.5	16.8
Days 2 to 56 (total)	21.5	21.5	21.7

tion, as long as they have been suckled for a minimum of two days. This would permit to reduce litter size in sows that show poor body condition in order to ensure optimal reproductive performance and longevity in the herd. This information is most important for producers as it will assist them in developing the best management strategies tailored to the individual needs of their primiparous sows according to body condition.

This project was funded by Ontario Pork ■

ADDRESS CHANGE or new subscriptions?

If you need an *address change*, or you would like to sign up for a *new subscription* - **for yourself** or **for someone else** - we have new contact information for you.

Charlotte Shipp
c/o Alberta Pork
 4828 – 89 Street
 Edmonton, AB T6E 5K1
Phone: (780) 491-3528
Fax: (780) 479-5128
charlotte.shipp@albertapork.com

NEW SUBSCRIPTIONS require a full name, mailing address, phone number & interest in the industry
(producer, researcher, supplier, etc.)

SUBSCRIPTIONS ARE FREE AND INCLUDE FIVE ISSUES PER YEAR.



Thank you for your continued support!